

FIG. 1

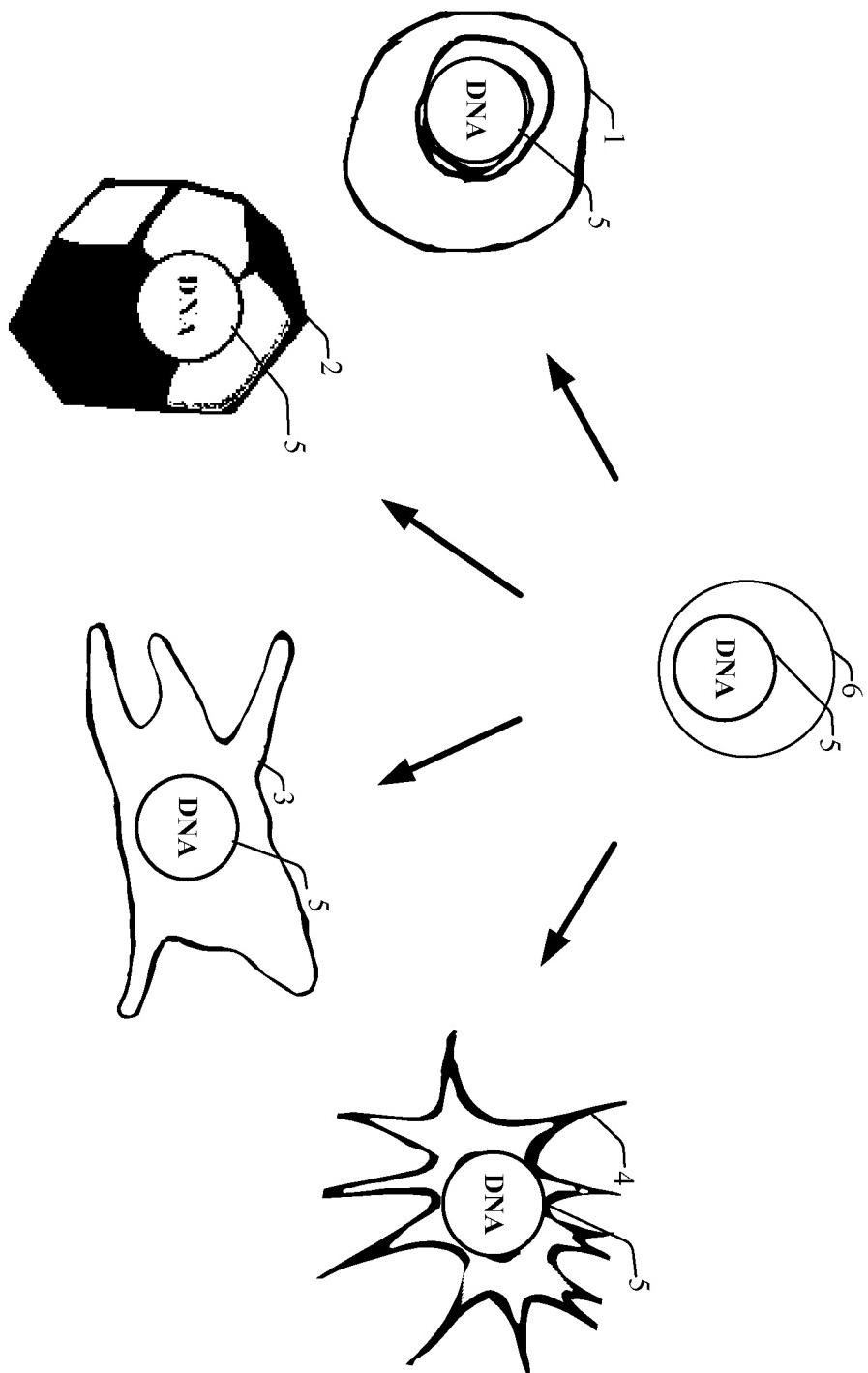


FIG. 2A

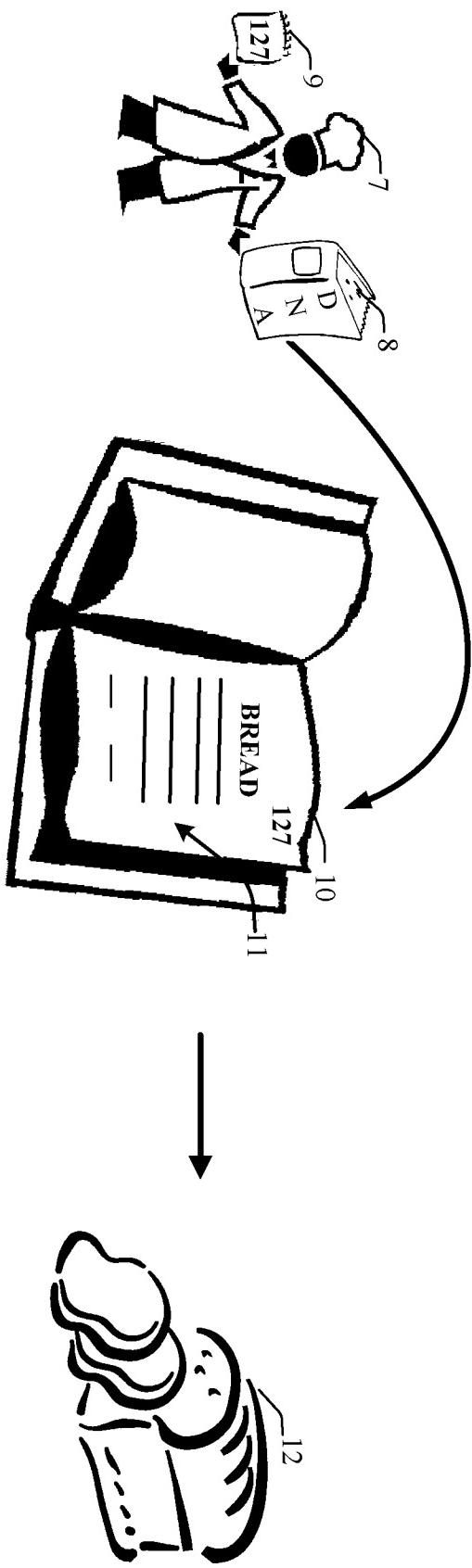


FIG. 2B

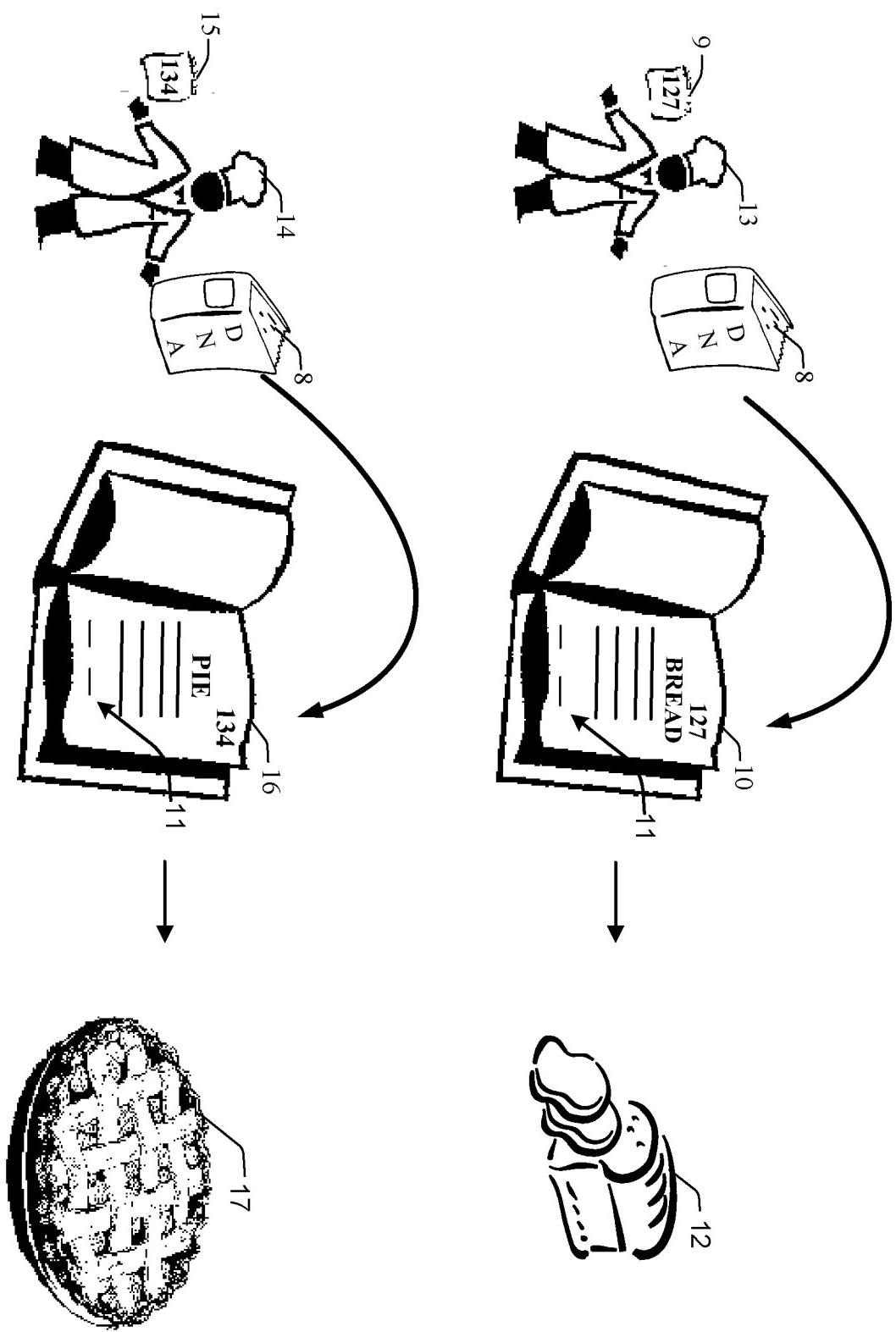


FIG. 3

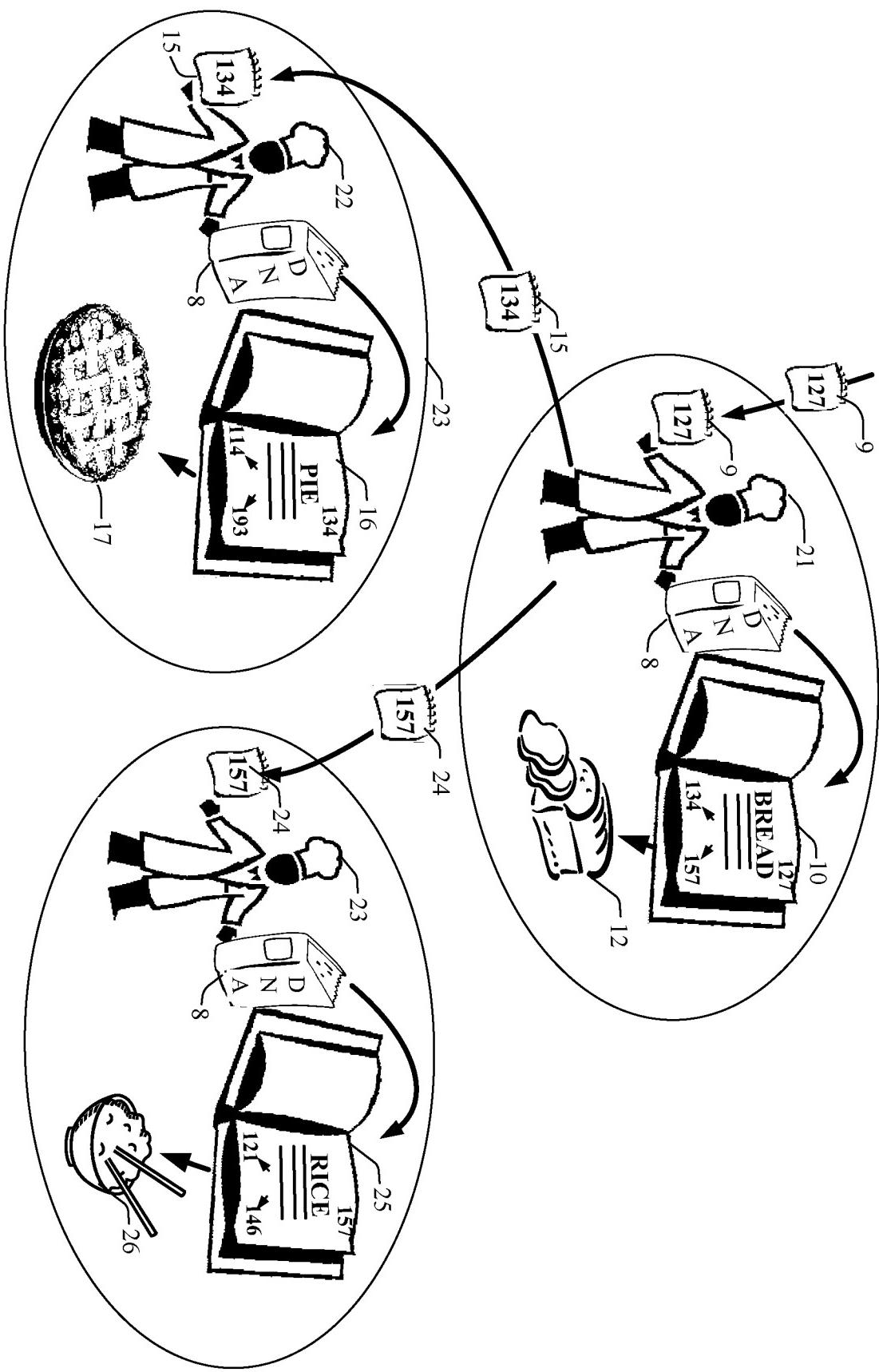


FIG. 4

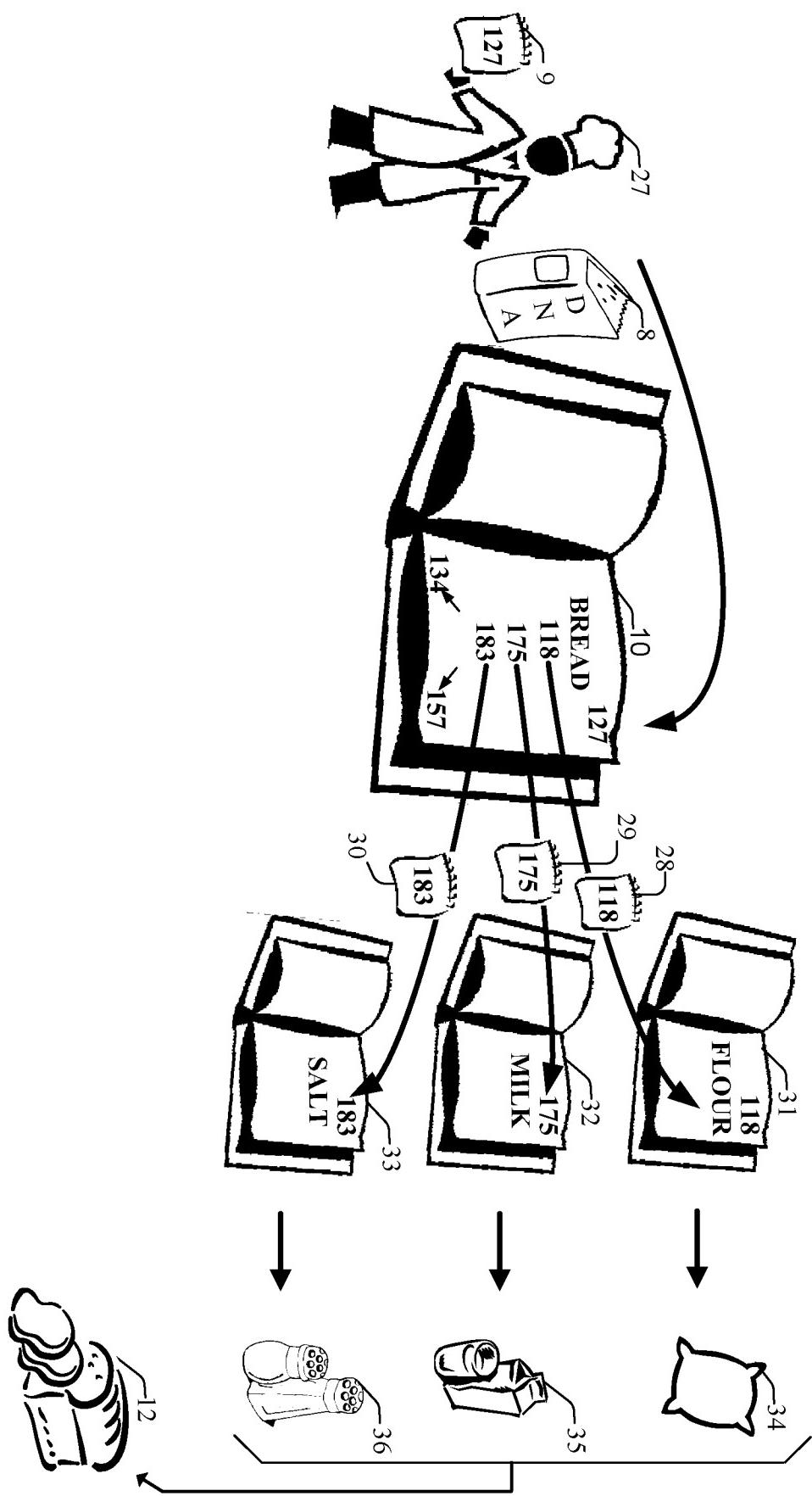


FIG. 5A

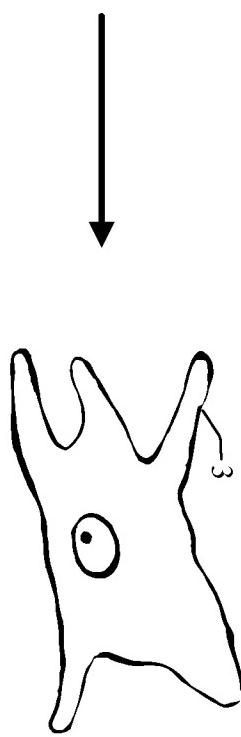
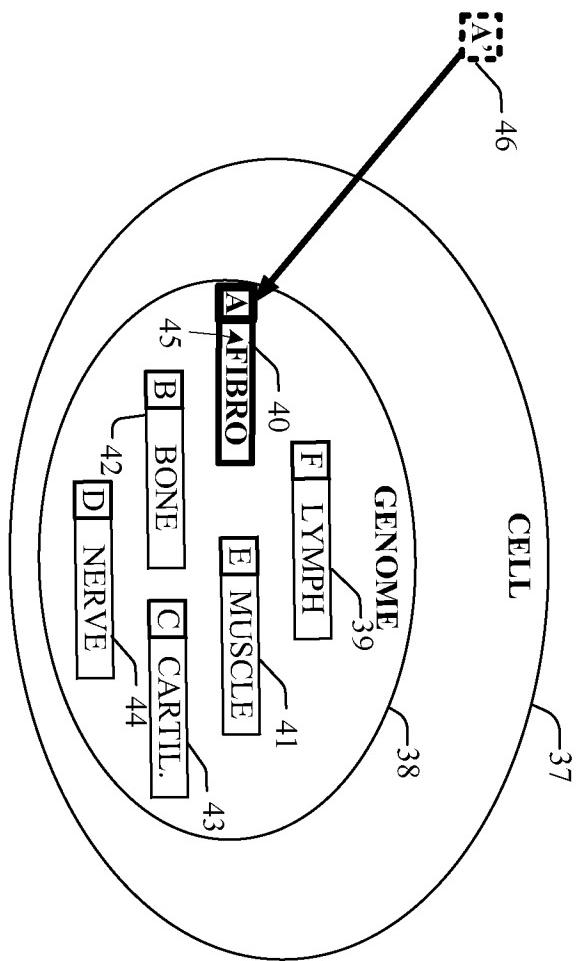


FIG. 5B

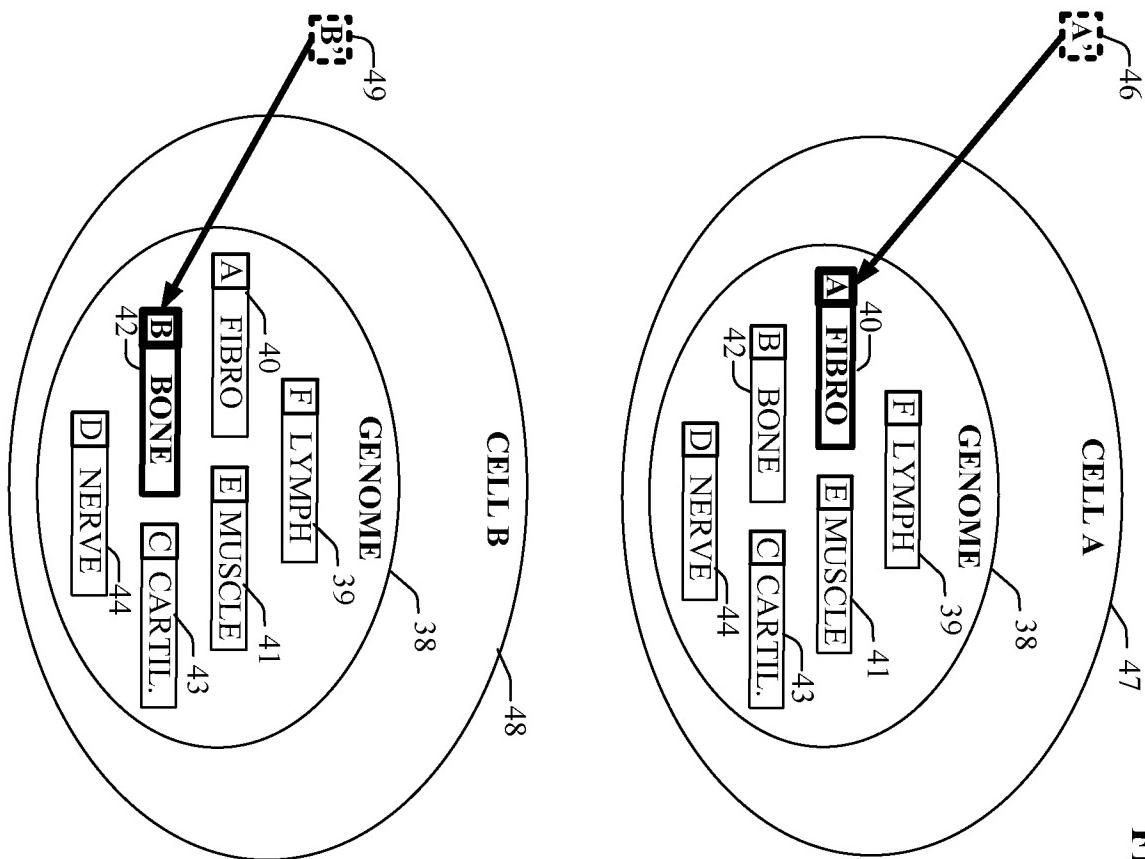


FIG. 6

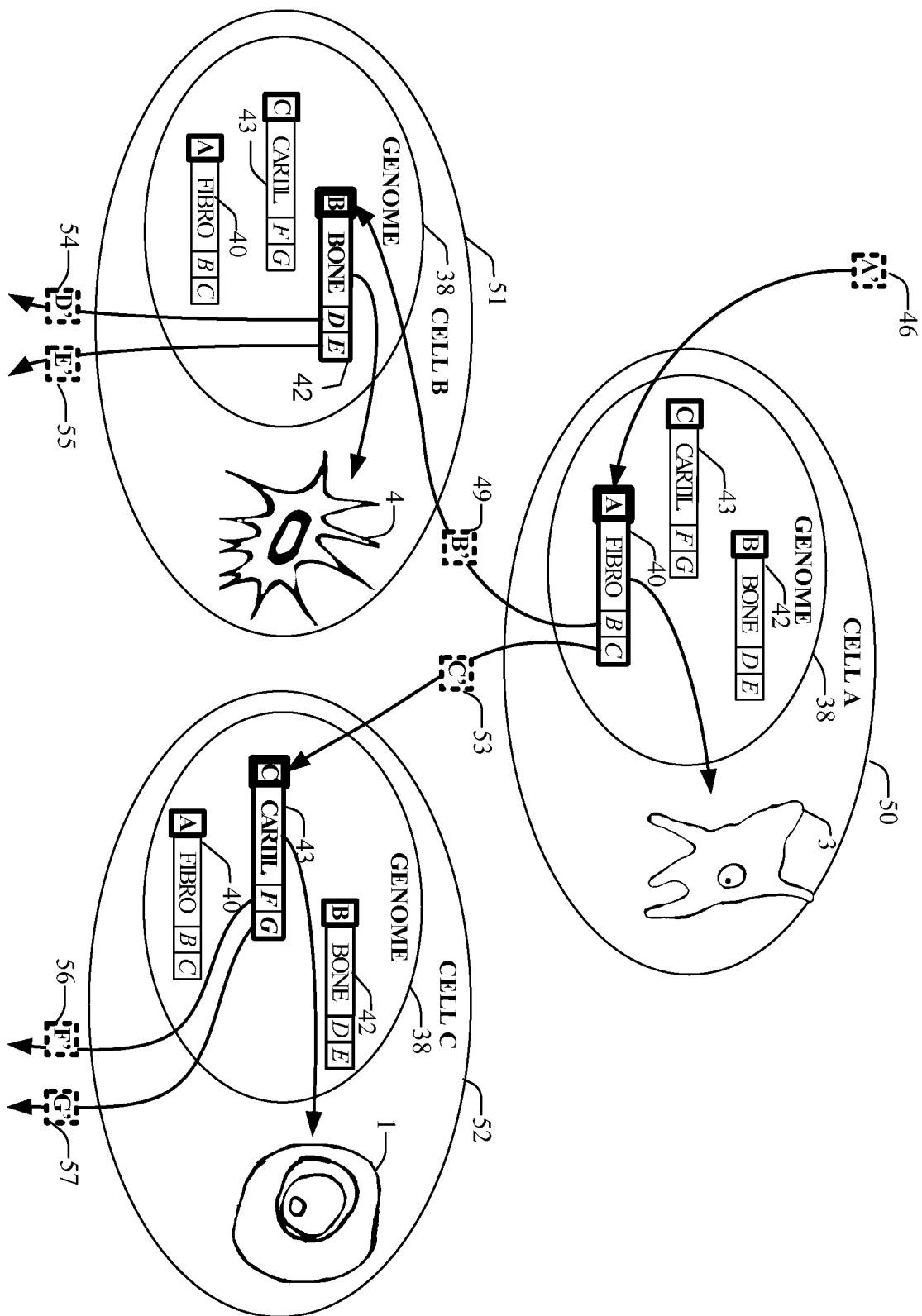


FIG. 7

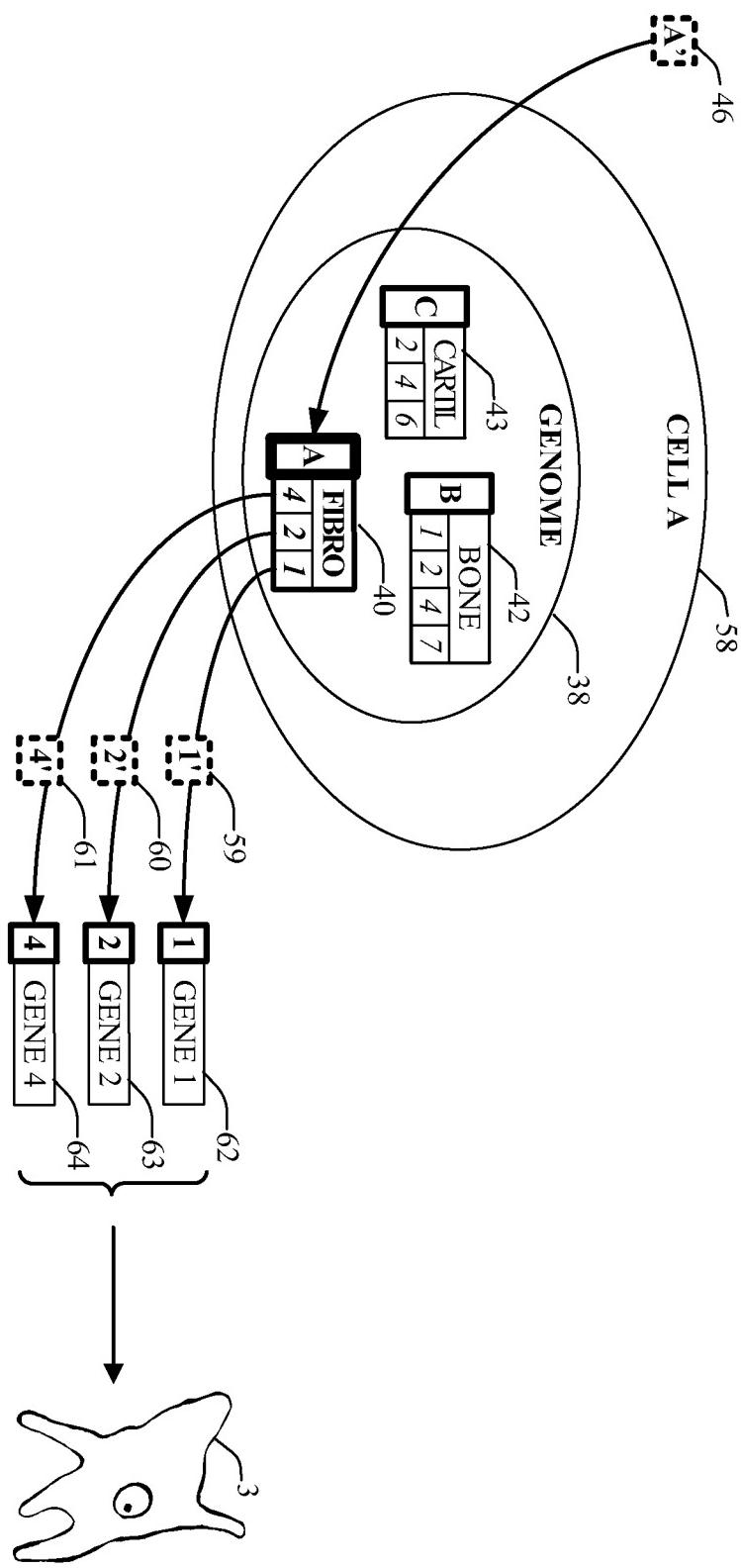


FIG. 8

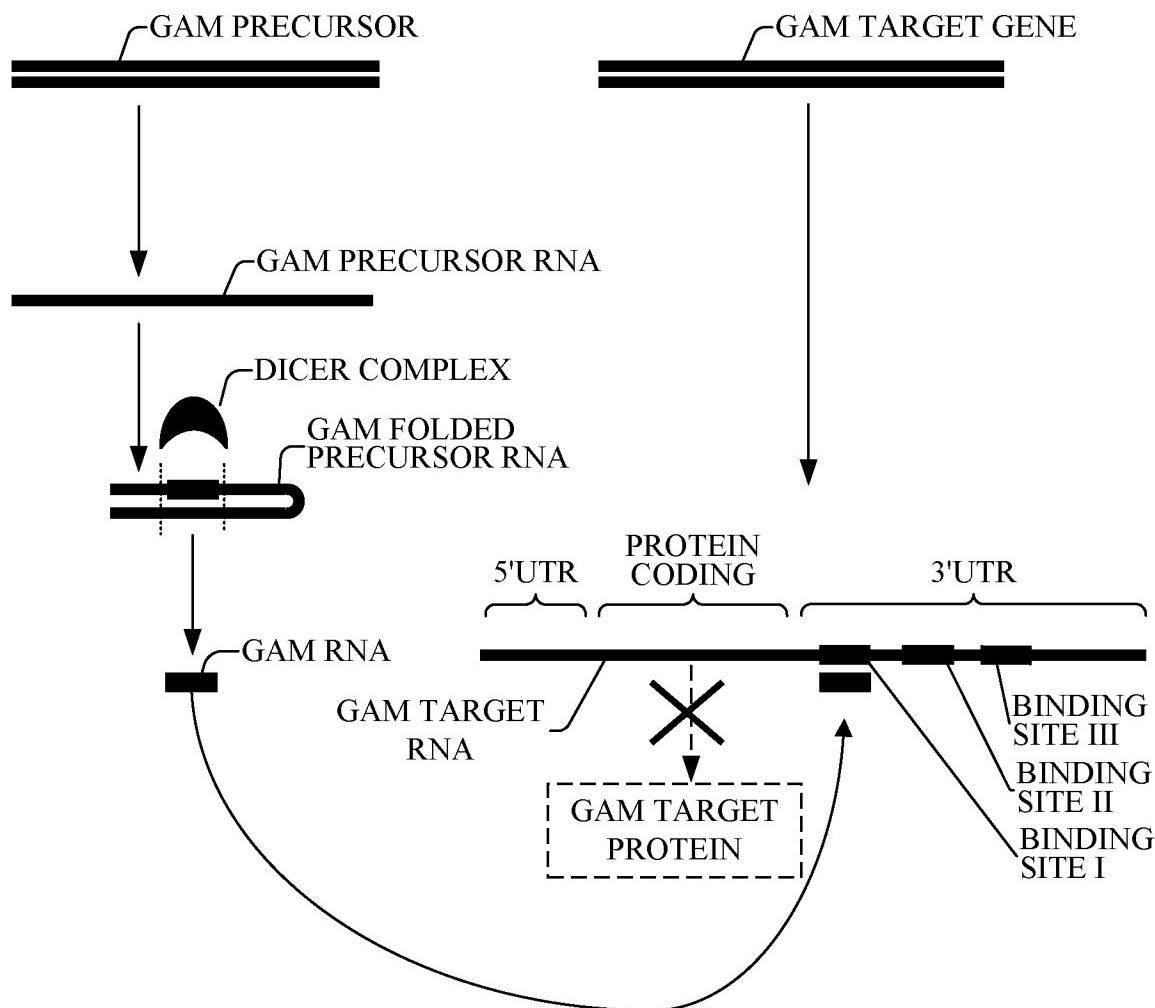


FIG. 9

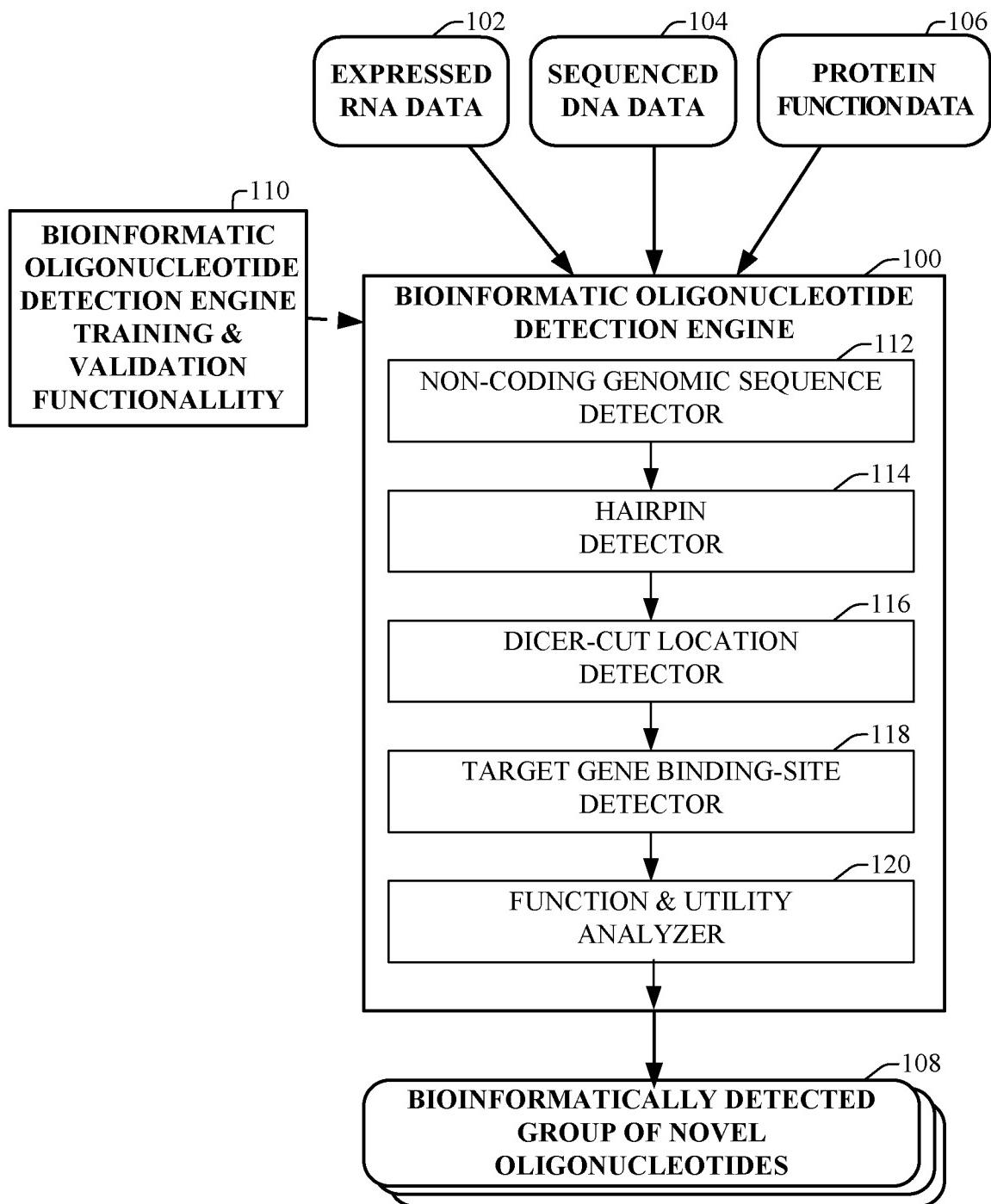


FIG. 10

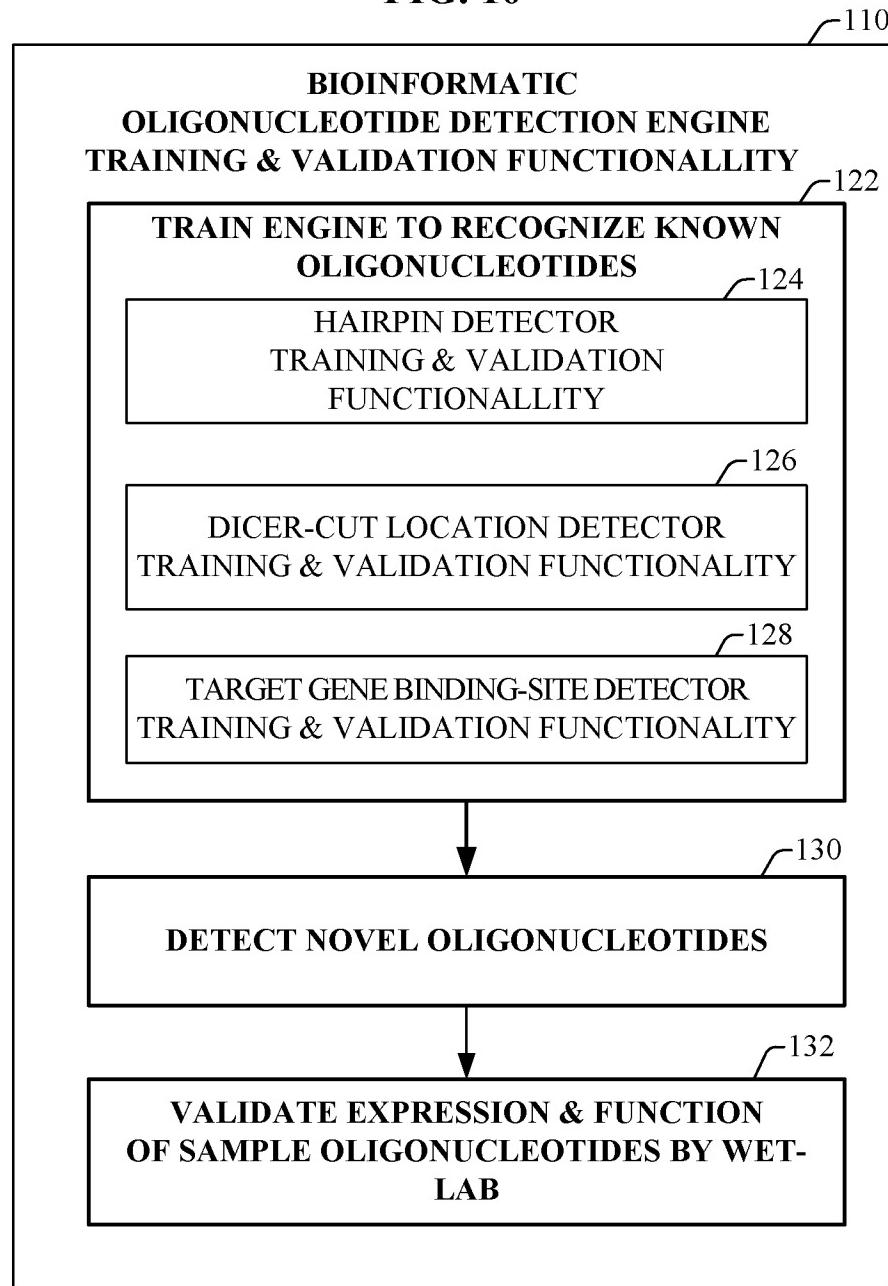


FIG. 11A

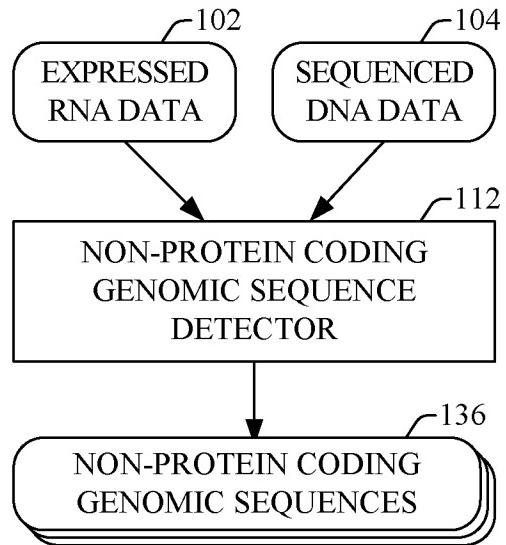


FIG. 11B

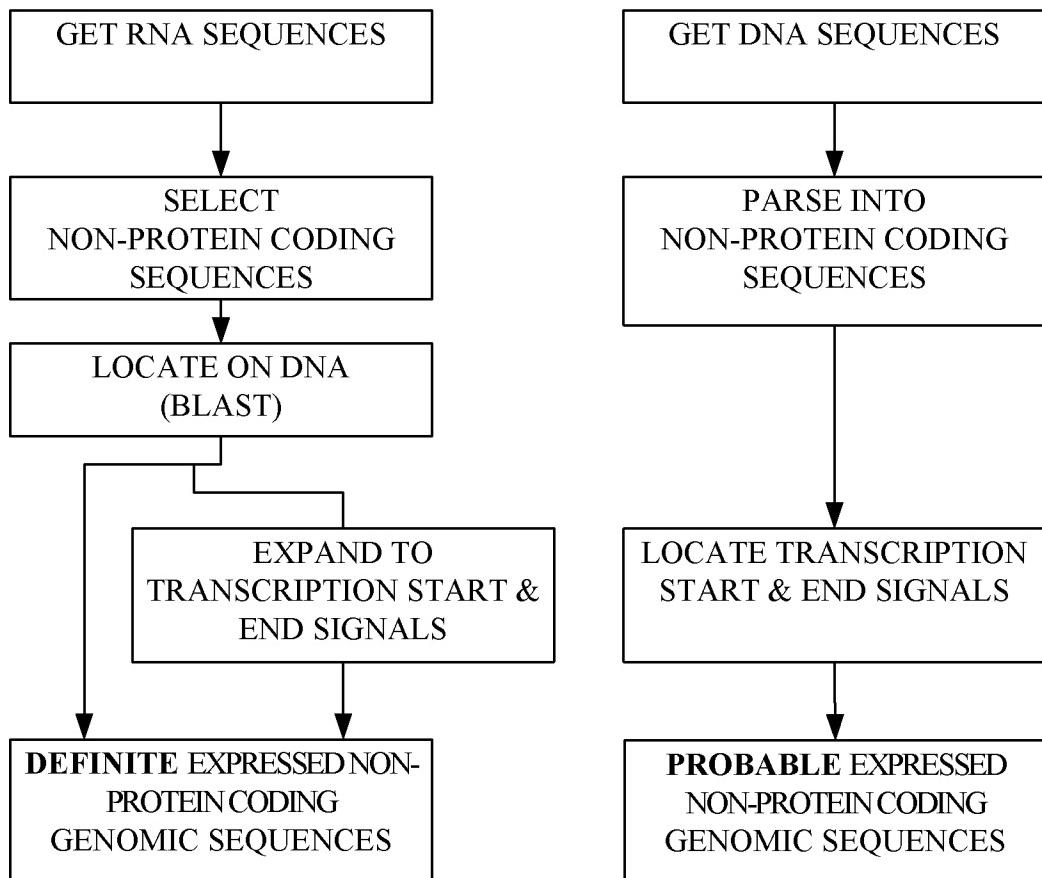


FIG. 12A

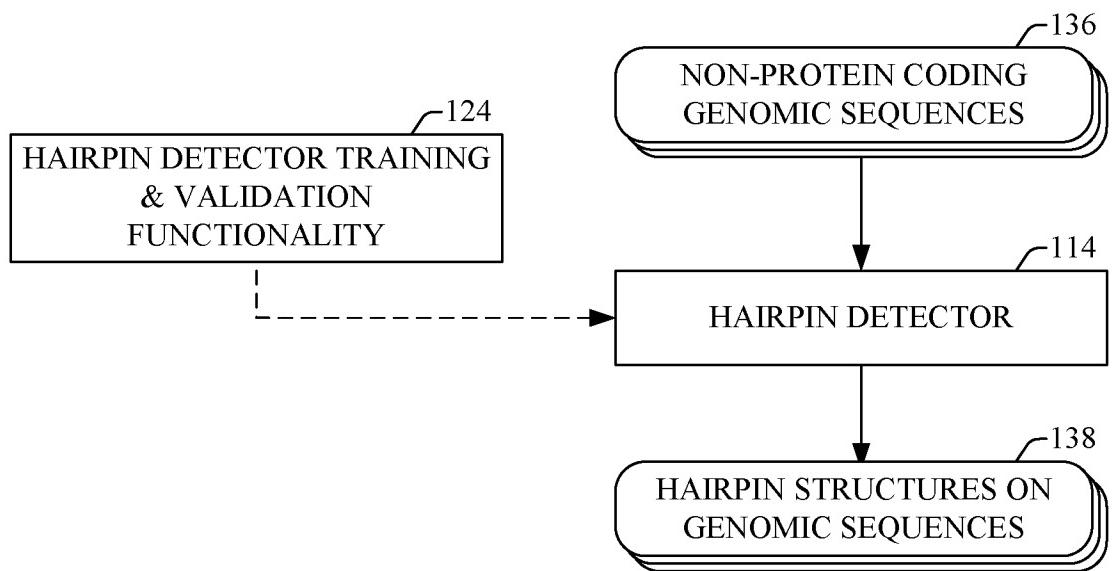


FIG. 12B

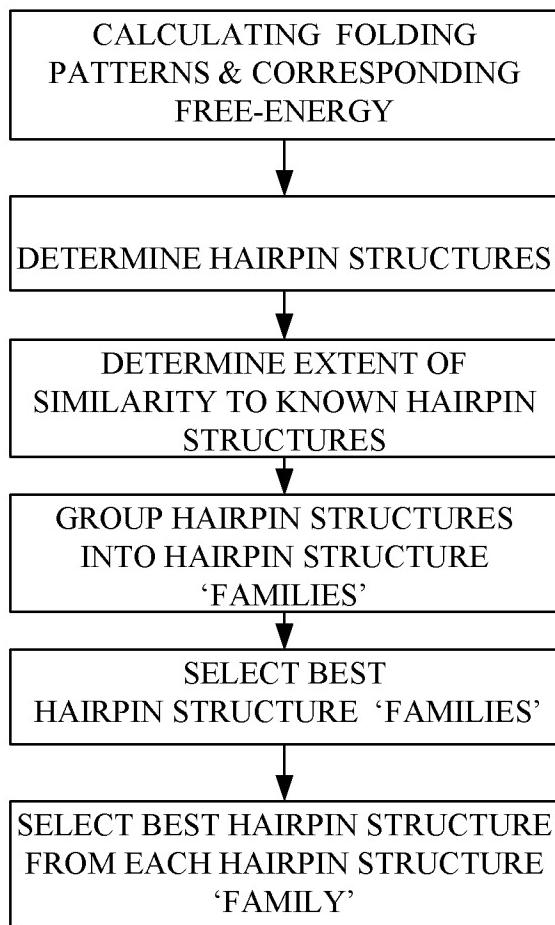


FIG. 13A

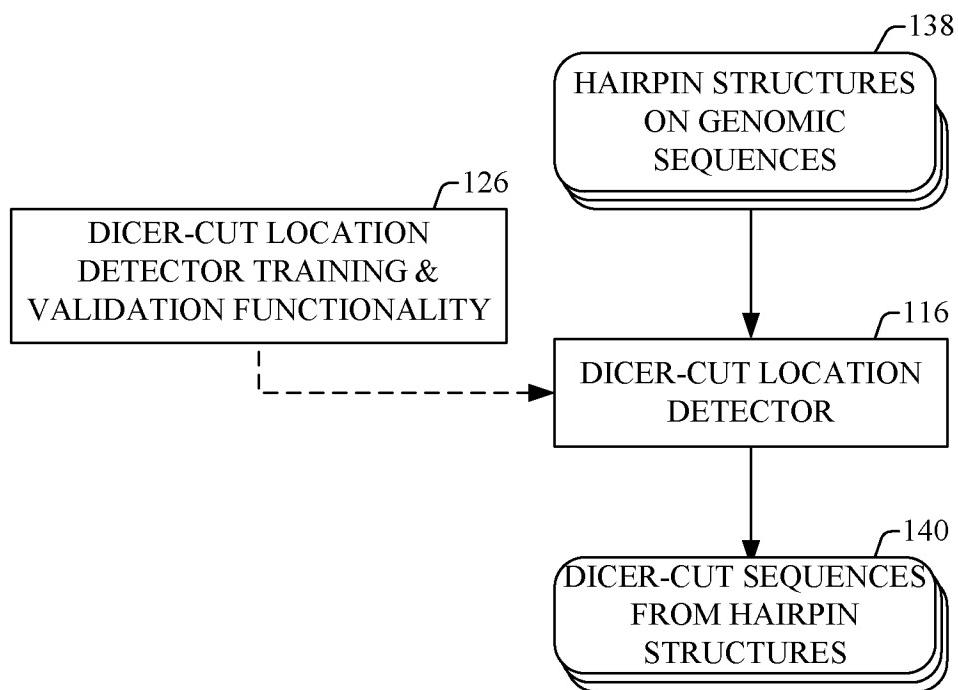


FIG. 13B

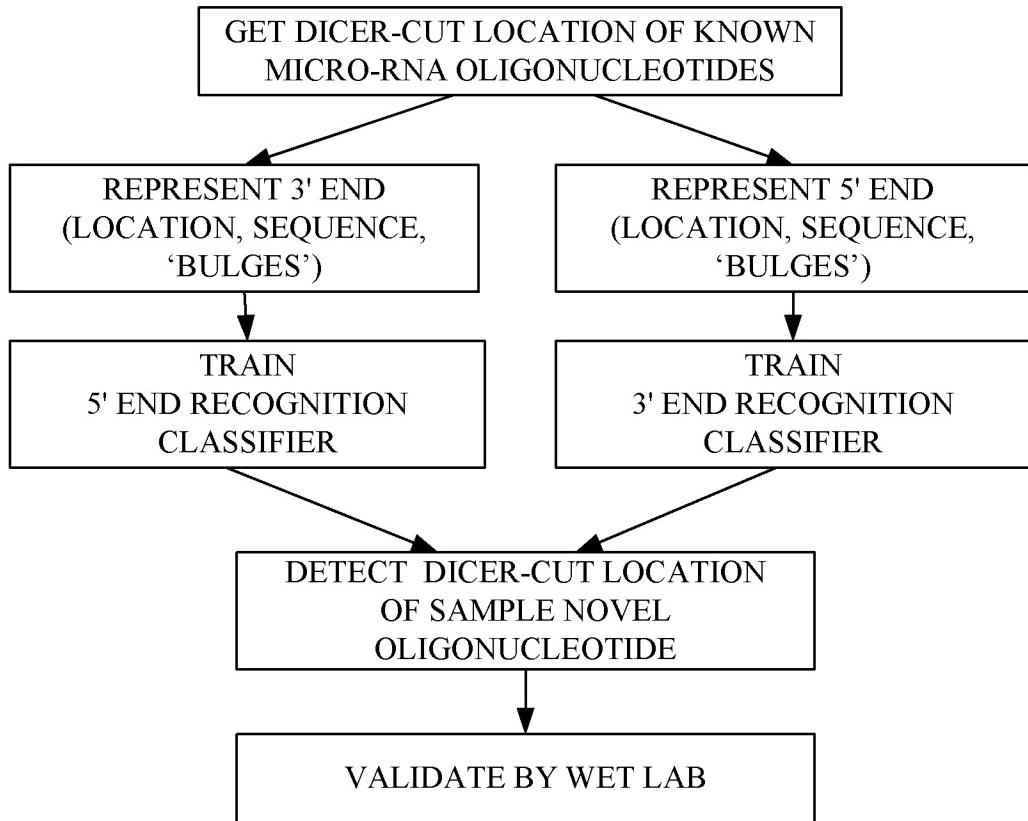


FIG. 13C

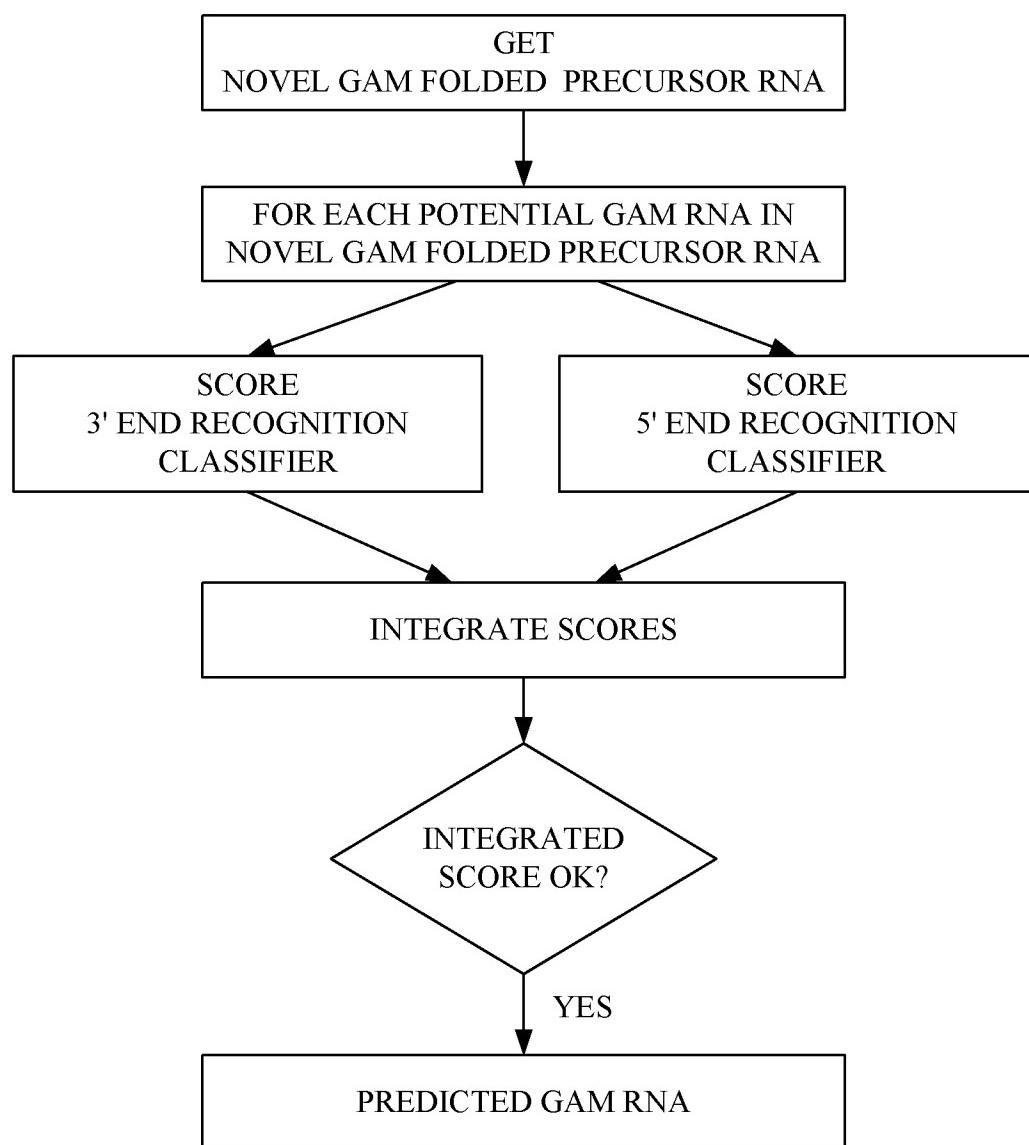


FIG. 14A

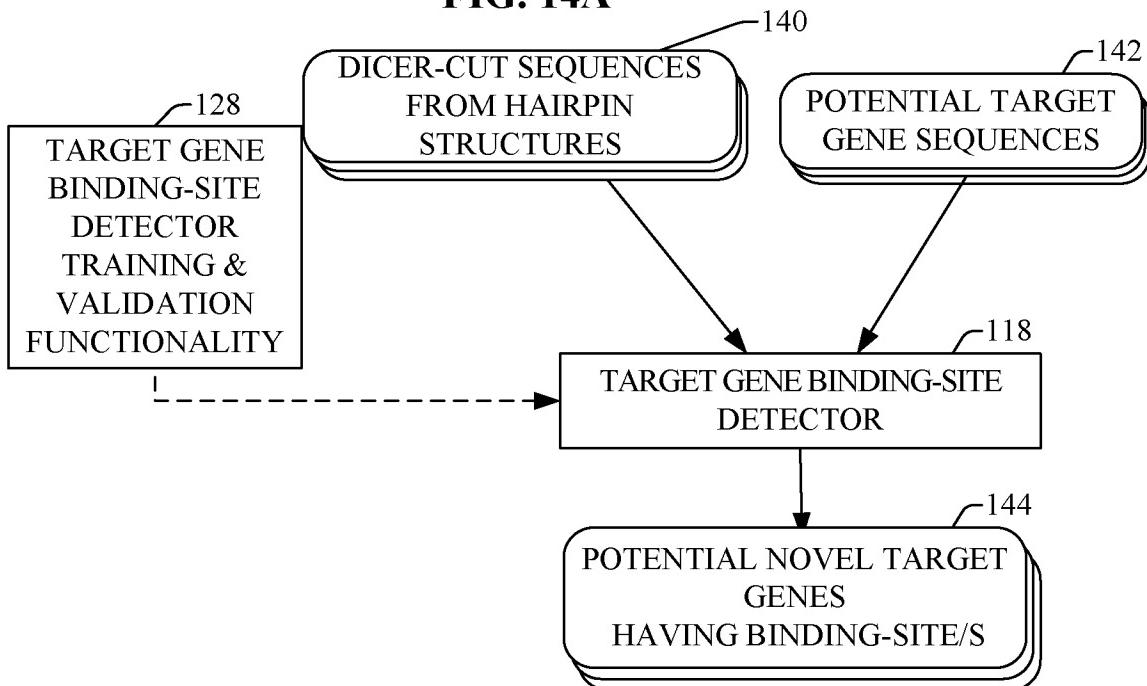


FIG. 14B

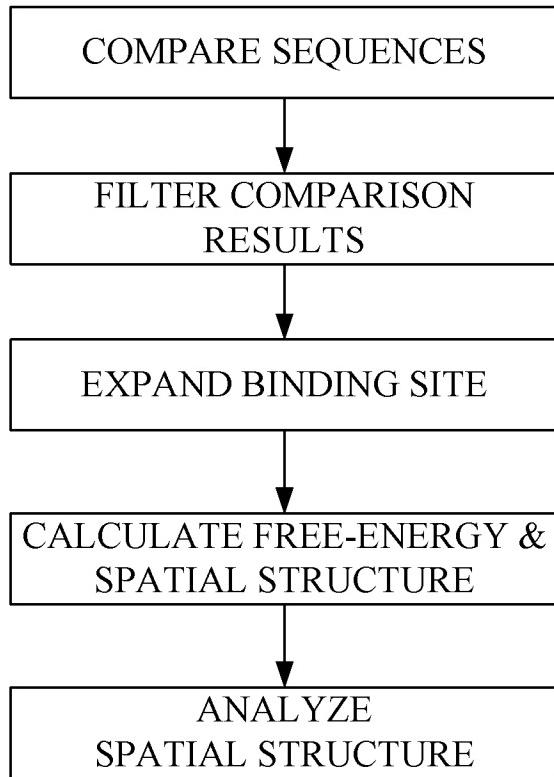


FIG. 15

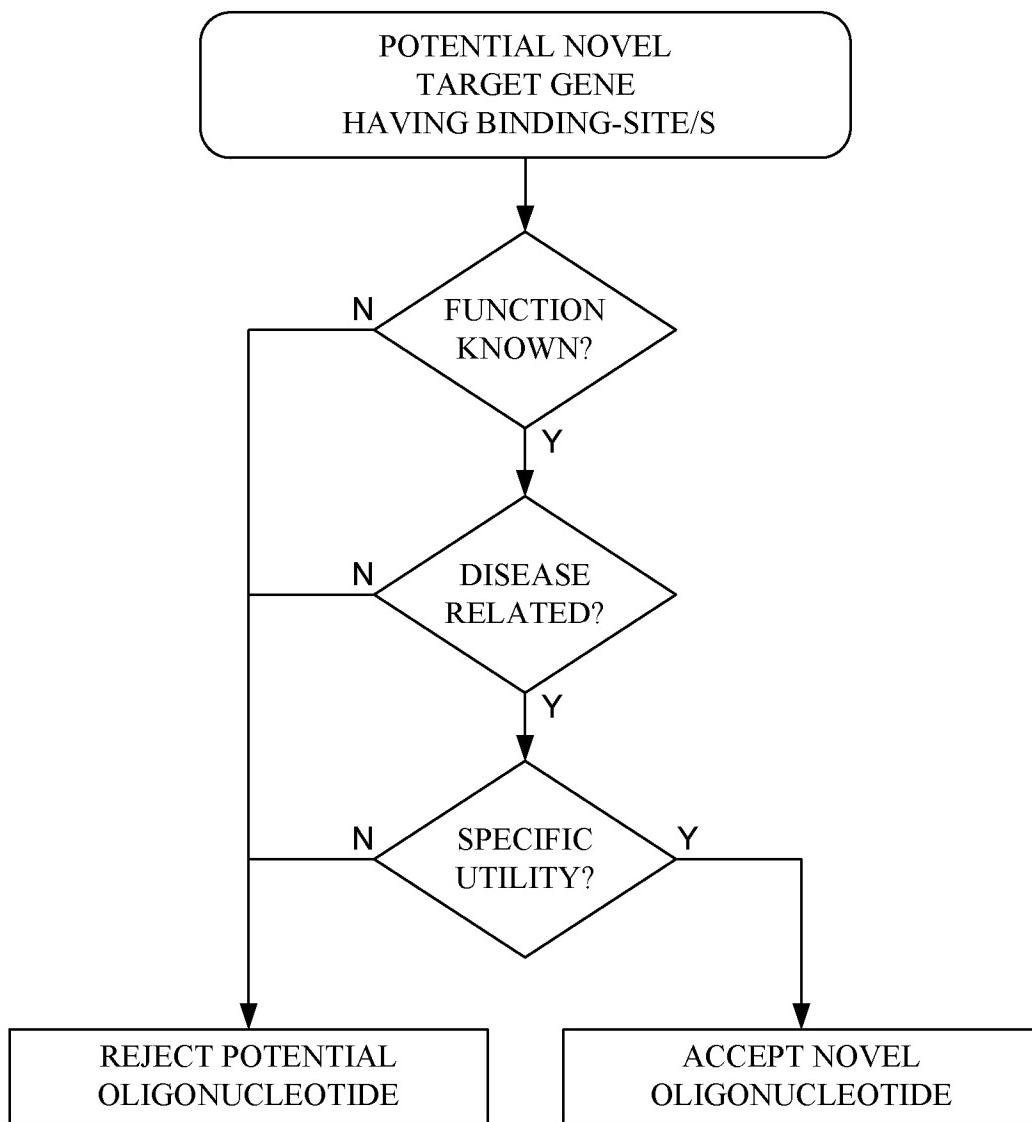


FIG. 16

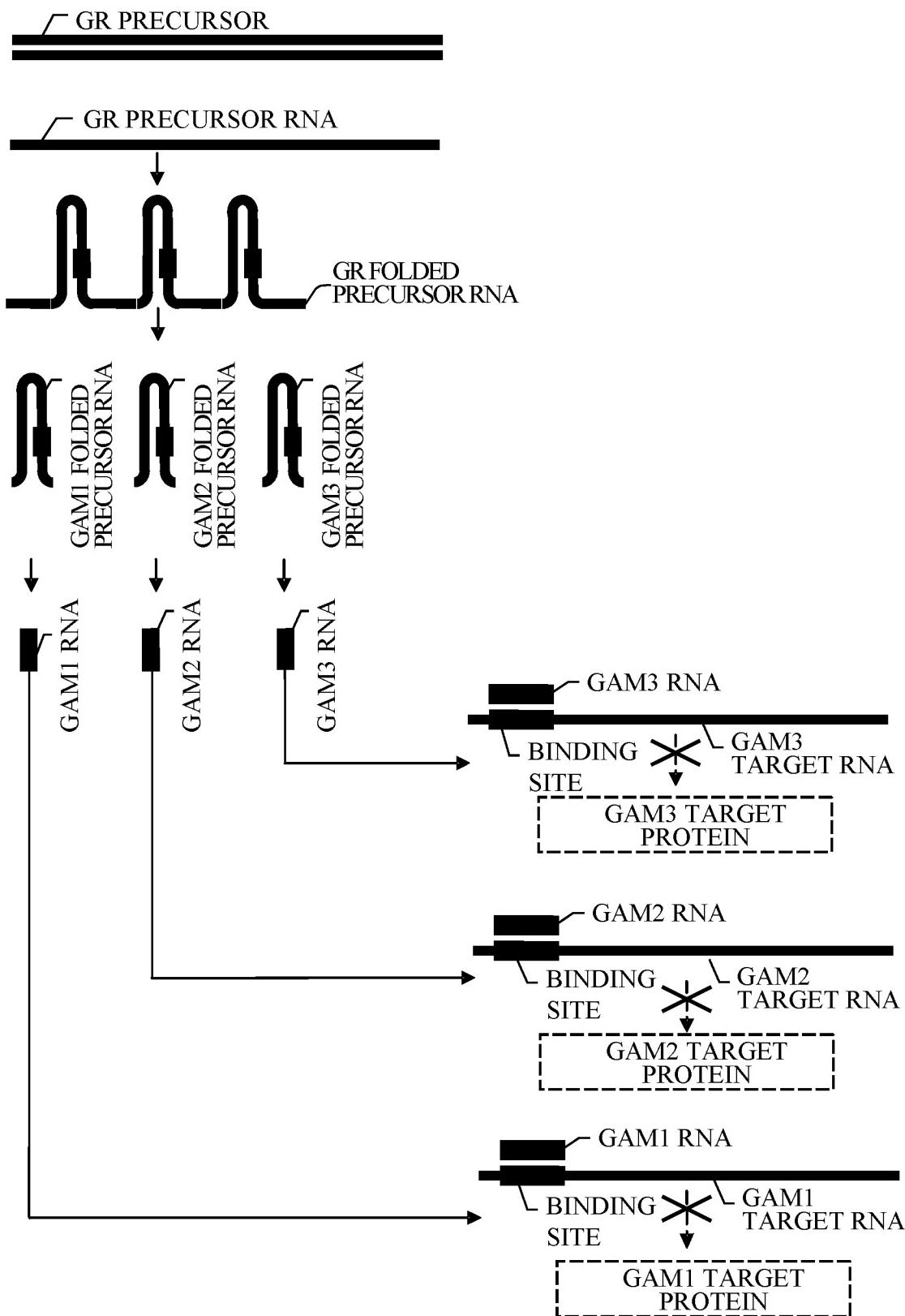


FIG. 17

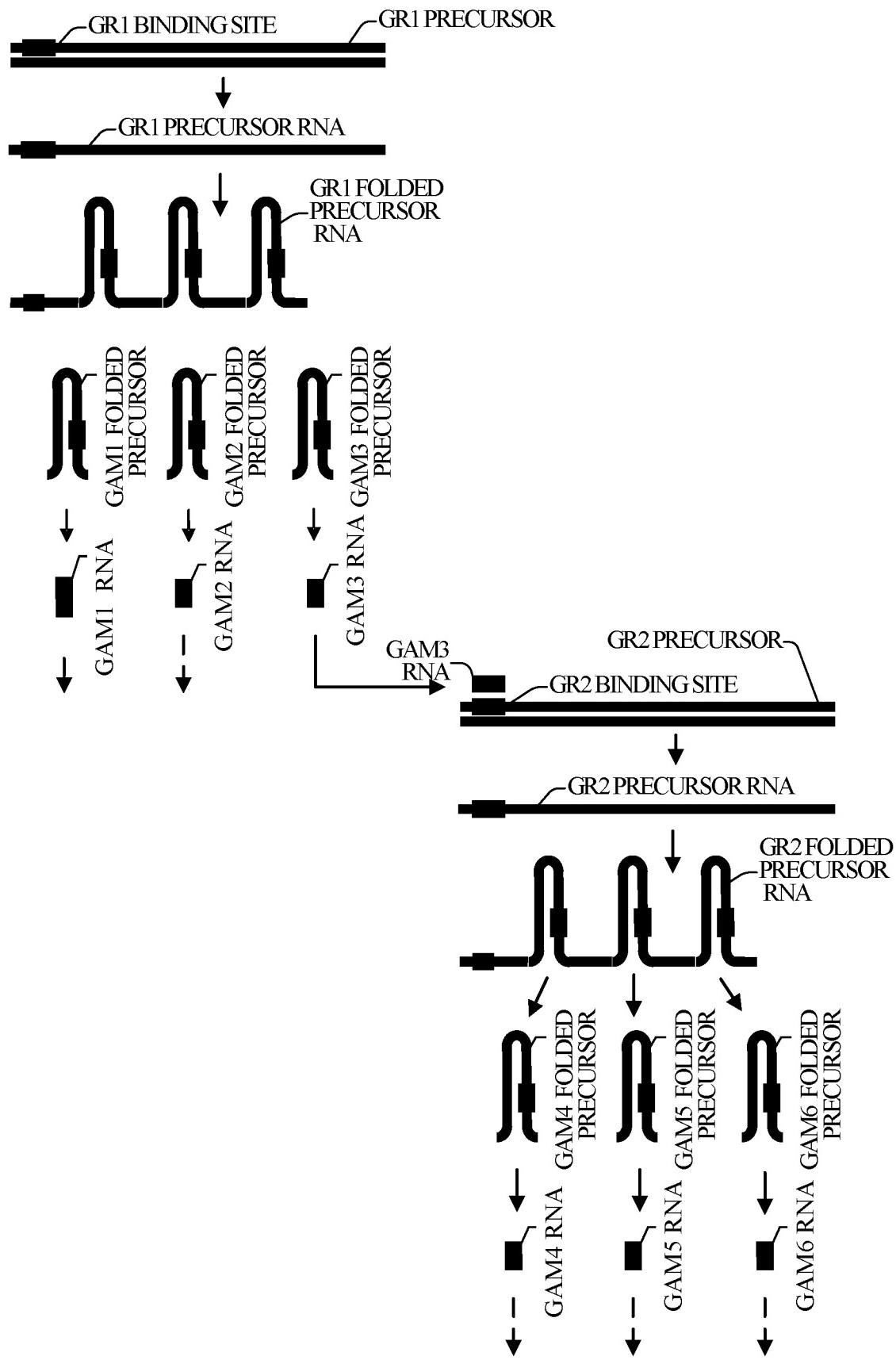


FIG. 18

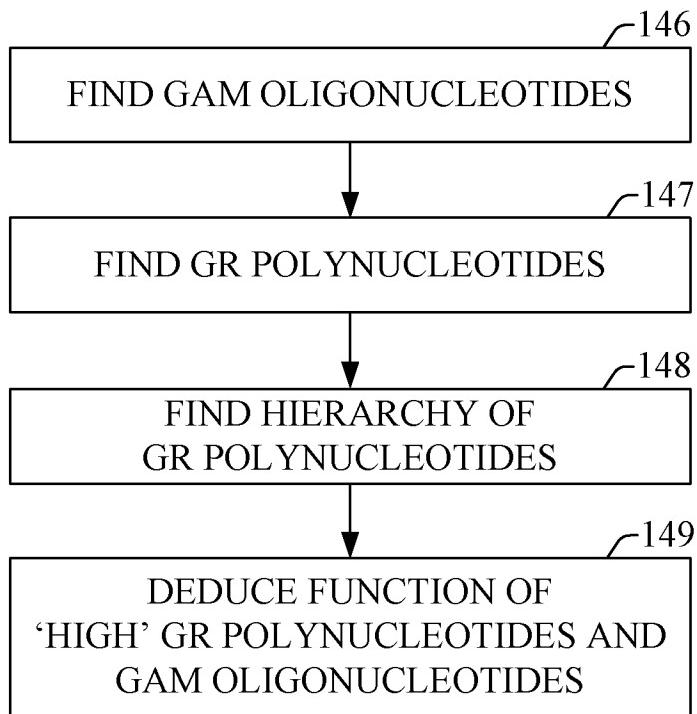


FIG. 19

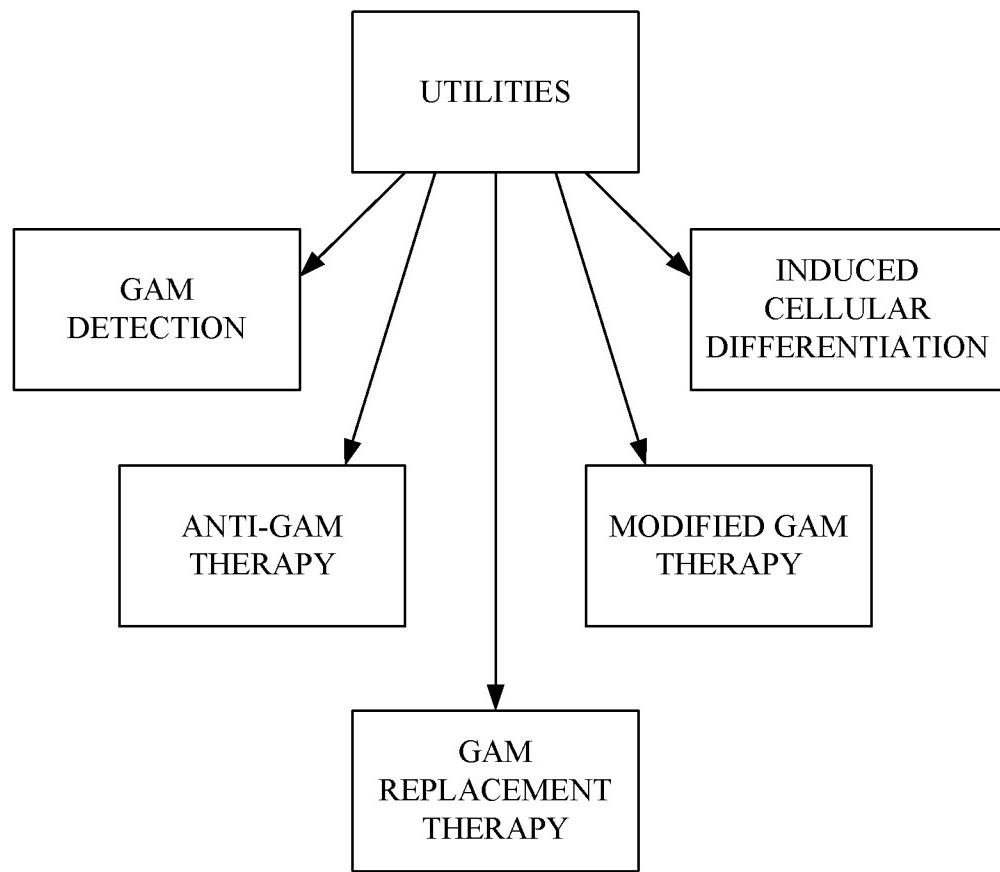


FIG. 20A

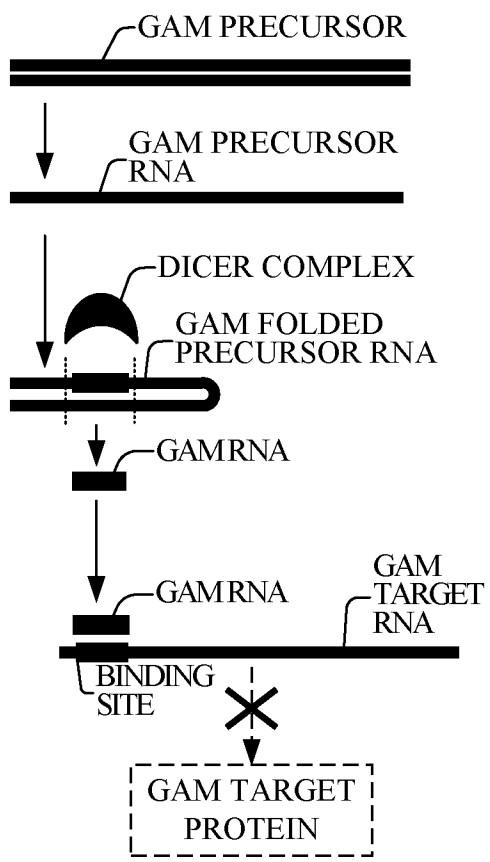


FIG. 20B

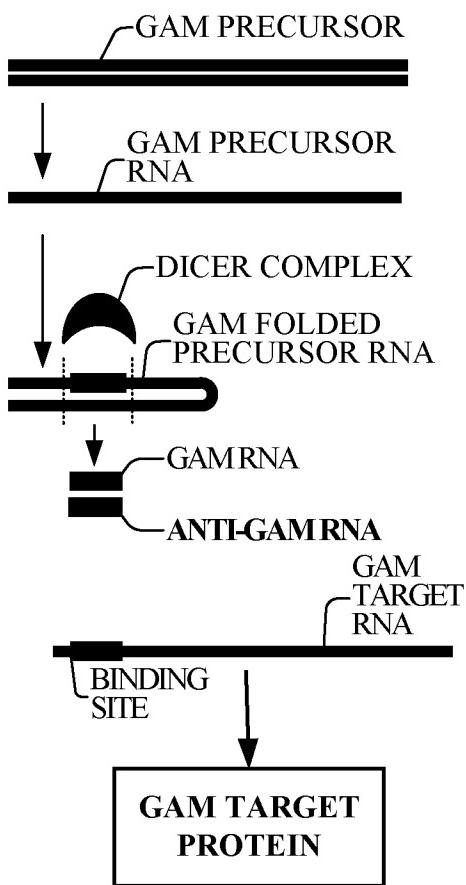


FIG.21A

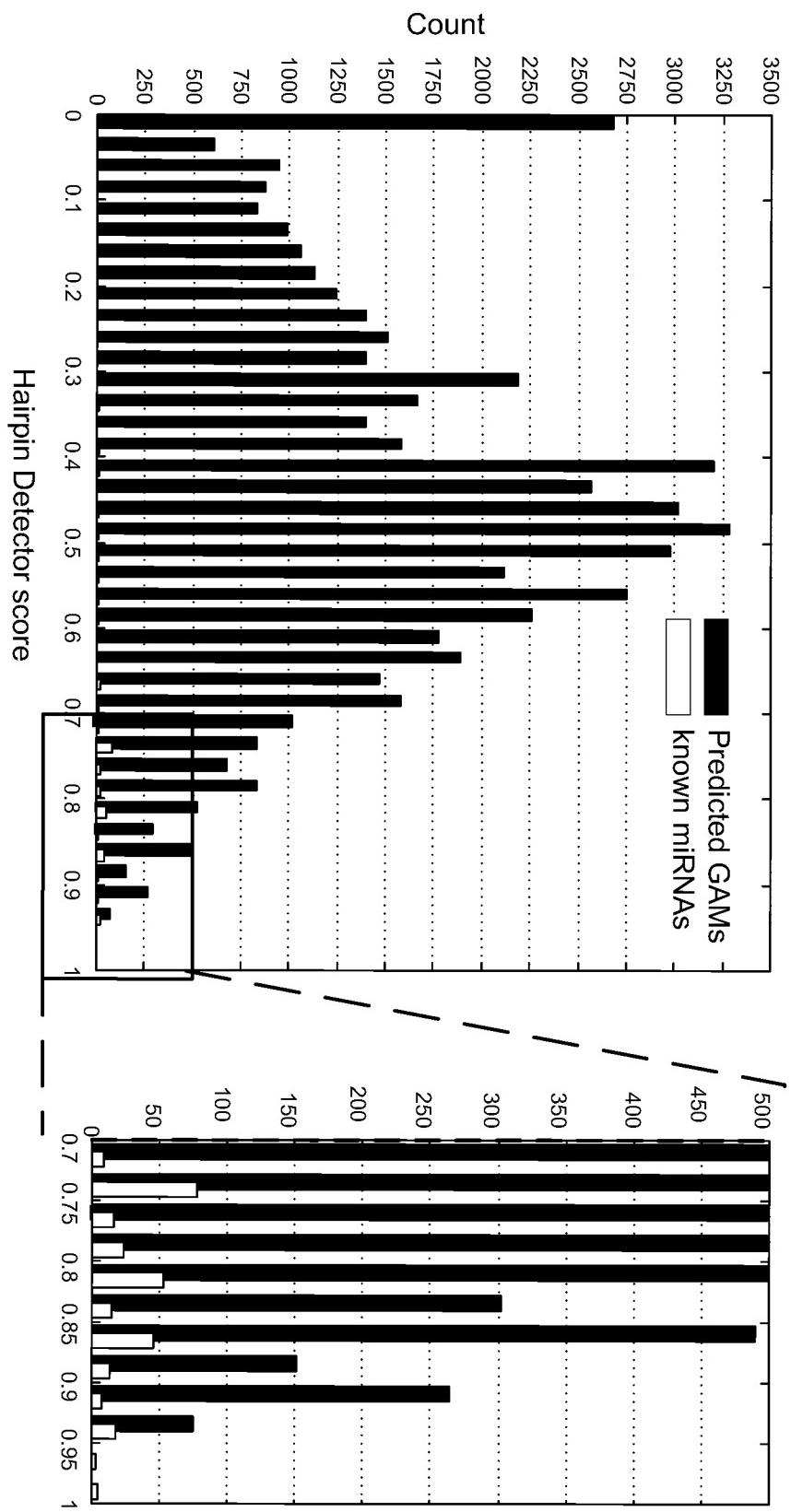


FIG. 21B

Lab Validation of Human GAMs					
GAM Detection Group	Published Hairpins Detection	Background Hairpins Filtering	Sent	Positive	% Success
A	382	~2850000 (95 %)	101	37	37%
Overall	440	~3000000	168	52	31%

FIG. 22A

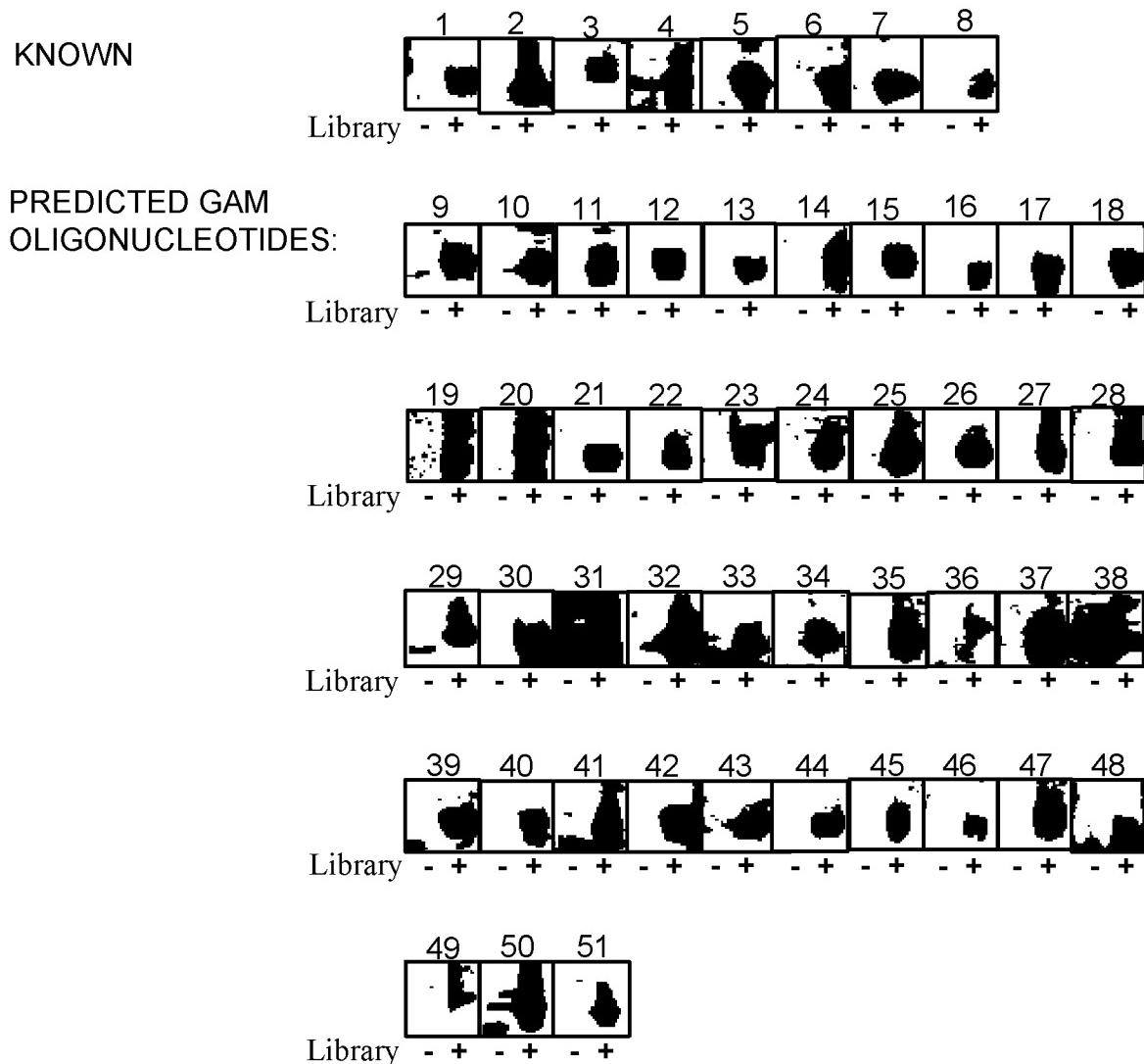


FIG. 22B

NUMBER	NAME	SEQUENCE (5 TO 3)	SEQUENCED
1	hsa-miR-21	TAGCTTATCAGACTGATGTTGA	+
2	hsa-miR-27b	TTCACAGTGGCTAAGTCTGCA	+
3	hsa-miR-186	AAAGAATTCTCCTTTGGGCTT	+
4	hsa-miR-93	AAGTGCTTCTGTGCAGGTAGT	+
5	hsa-miR-26a	TCAAGTAATCCAGGATAGGCTG	+
6	hsa-miR-191	AACCGAATCCAAAAGCAGCTG	+
7	hsa-miR-31	GGCAAGATGCTGGCATAGCTGT	+
8	hsa-miR-92	TATTGCACTTGTCCGGCCTGT	+
9	GAM3418-A	ATCACATTGCCAGGGATTACCA	+
10	GAM4426-A	GAAGTTGAAAGCCTGTTGTTCA	+
11	GAM281-A	CACTGCACTCCAGCCTGGGCAA	
12	GAM7553-A	TAGGTAGTTCTGTGTTGGG	+
13	GAM5385-A	TCACAGTGAACCGGTCTCTTC	+
14	GAM2608-A	TAAGGTGCATCTAGTGCAGTTA	
15	GAM1032-A	CTAGACTGAAGCTCCTTGAGGA	+
16	GAM3431-A	TAATACTGCCGGGTAATGATGG	
17	GAM7933-A	TAGCAGCACATAATGGTTGAA	
18	GAM3298-A	AAAGTGCTCATAGTGCAGGTAG	+
19	GAM7080-A	TTTCCACAGCGGCCATTCTTC	+
20	GAM895-A	AGCTGCCAGTTGAAGAACATT	
21	GAM3770-A	AAGTTAACAGACTCCCAGGCCTG	
22	GAM337162-A	ACTGCACTCCAGCCTGGGCAAC	+
23	GAM8678-A	GTGTTCCAGGAAGTCGTCTTGA	
24	GAM2033-A	TCAAGCTCATTCTCTAACCTC	
25	GAM7776-A	CATTGCACTCCAGCCTGGGCAA	+
26	GAM8145-A	ACATGATCTCCTCACTCTAGGA	
27	GAM25-A	AATTGCTTGAACCCAGGAAGTG	+
28	GAM7352-A	TGTTTAAGTAGCTTATTATCT	
29	GAM337624-A	TCTAACAGAAAAGGAAGTTCAGA	+
30	GAM1479-A	GAAGGCAGTAGGTTTATAGTT	+
31	GAM2270-A	ATCACATTGCCAGTGATTACCC	+
32	GAM7591-A	TTGGAGTAATTCACTATAGGTT	+
33	GAM8285-A	AGTAGACAGTGGCAACATAGTC	
34	GAM6773-A	CTAGCCTTTGTCCCTCACCCCC	+
35	GAM336818-A	TGAGGTGGATCCCGAGGCC	+
36	GAM336487-A	TGGCTAGGTAAAGGAAAG	+
37	GAM337620-A	AATCATCATTATTTGAAGTTA	+
38	GAM336809-A	TAAGGCATTTTATGGT	+
39	GAM5346-A	GCTGTTGTTAACGGCACTGGG	
40	GAM8554-A	TTCATGGGAGCAGGTGGTACAG	
41	GAM2701-A	ACTGCACTCCAGTCTGGGTGAC	
42	GAM7957-A	TCACTGCAACCTCTGCCCTCCG	
43	GAM391-A	CAGATCACATCCATCCGTCACC	
44	GAM6633-A	GCACTCAAGCCTGGGTTACAGA	
45	GAM19	AGAGAGTGGCAGGTCTGTTCT	
46	GAM8358-A	GATGAGGCAGCACTGGG	
47	GAM3229-A	TGAGGTGGGAGAATTGCTTGAA	
48	GAM7052-A	CATGTAATCCCAGCTACTCAGG	
49	GAM3027-A (mmu-MIR-29c)	TAGCACCATTGAAATCGGTTA	+
50	GAM21 (mmu -MIR-130b)	CAGTGCAATGATGAAAGGGCAT	+
51	GAM oligonucleotide(mmu-MIR-30e)	TGTAAACATCCTGACTGGAAG	+

FIG. 23A

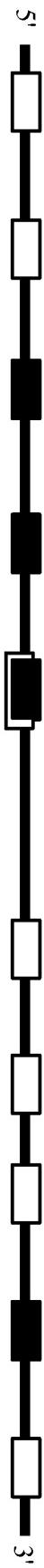


FIG.
23B

N2 G A CAGT C--- G C--- --- CC
 5' CCC TG GGGAA GGC GGGATT TC CAGGG CCCCCTT \\\
 3' GGG AC CCTT CCG CCCTGAG GTCT GGGGGAA A
 - - - - - AAAC G TTCA CCA CG

N 5' AC- TA ACA ---- - ---- AG
 CTCCTGTTTGC GCATA GGC GTG AAGG CGCG T
 3' GGGG GAGACAGC TGTGT CCG CGC TTCC GCGG G
 CAC --- GAC AAGG C TGCG CT G

MIR235


- CACT ----- T A ACA -- - G- ----- -GG
 5' GGTCG CGCT GCA GAT GG GA GGT GCATCT C TAGCT CTTCTTT A
 3' CCAGT CGGA CGT CTG CG CT CCA CGTAGA G TGCGA GAAGAAA A
 A CC-- ATTATATTCG -- A GG- CT A GA CCACC ACA

GAM116

GGGA	G	AGCCGC	G	A	TT	G		
5'	TG	CA	TTAAGTTGG	TG	GGCAG	GGCCG	GCT	A
3'	GC	GT	GGTTCGACT	AC	TCGTC	CCGGC	CGG	C
	----	G	GAC---	G	G	--	G	

5' GGTCAAATGTATTGAAAGTTGC~~AAA~~ATTCTTCTTACAAA
3' AACTAAAACCAATGCATCACCTAACGTCGTGTGAAATCA

TG -- C -- GG T G T
 5' GGCTG A GCGGGG GGGG CG GC TTTCGAG AGC C
 3' CTCGAC T TGTTCCT TCTC GT CG GGGTCTT TTG C
 GT TA C AA GG C G T

G G A TA TCTCAT
 5' CTCC GT CCT CTGAGCTGA TCAGT \\\
 3' GAGG CA GGA GACTTGA GGTCA T
 A A C C- CACATT

$5'$ TAGC AGCT TGTG ACGC GCCTG TACA $3'$ GTCG TCGG ACAC TCGC CGGAC GTGT	- AT T AAA AG ---- - - T C C - AC- GA GCAC T T T
--	---

FIG. 23C

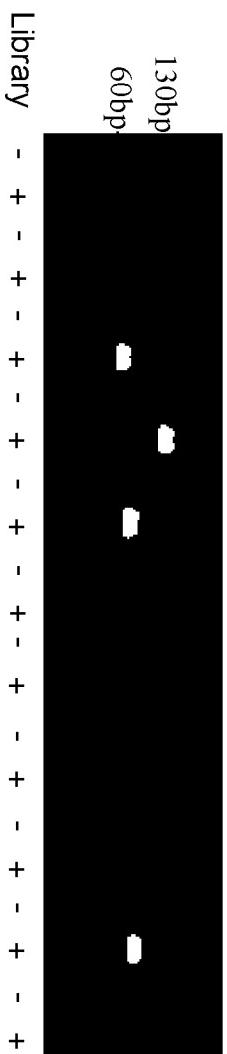


FIG. 24A

EST72223 (705 nt.)

Chr.X



EST72223 sequence:

CCCTTATTAGAGGATTCTGCTCATGCCAGGGTGAGGTAGTAAGTTGAT
TGTGGGGTAGGGATATTAGGCCCAATTAGAAGATAACTATACAAC
TACTACTTCCCTGGTGTGGCATATTCACACTTAGTCTTAGCAGTGTG
TCCATCAGACAAAGTTGTAGATGTCCTTGATAATTGGACTGGAAGAAAAGA
GACATGGAAGGGGACAGATGGTGTAGGGTAGGCAGATGTCATTATAAAGT
GACTTGTCTTCATTAATTGGAGCATATAATTATTTACCTTGGGCATGAACTC
ATTTTGCTATTCTCAACTGTGTAATGATTGCATTTATTAGTAATAGAACAGGA
ATGTGTGCAAGGGAATGAAAGCATACTTTAAGAATTGGGCCAGGCGCGGT
GGTCATGCCTGTAATCCCAGCATTGGAGGCCAGGGGTGGATCAC
CTGAGGTCAGGAGTTCGAGACCAACCTGGCCAACACGGCAAACCCCCGCCTC
TACTCAAATACAAAAATTAGCCAGGCTTGGTACACTGCCCTGTGGTCCCAGC
TACTCAGGAGGCTGAGGCAGGAGAATTGCTGAACCCAGGAAGTGGAG
GCTTCAGTGAGCTGAGAACACGCCACTGCACTCCAGTCCTGGCAAC
AGAGCAAGACTCTGCTCAGGAAAAAAAAG

FIG. 24B

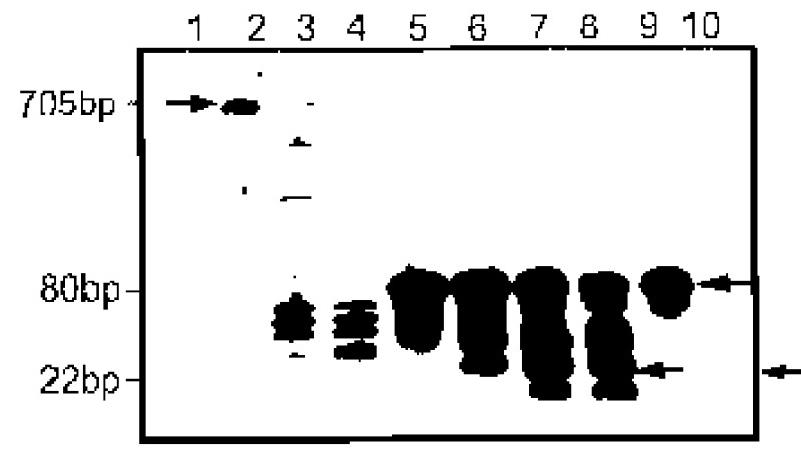


FIG. 24C

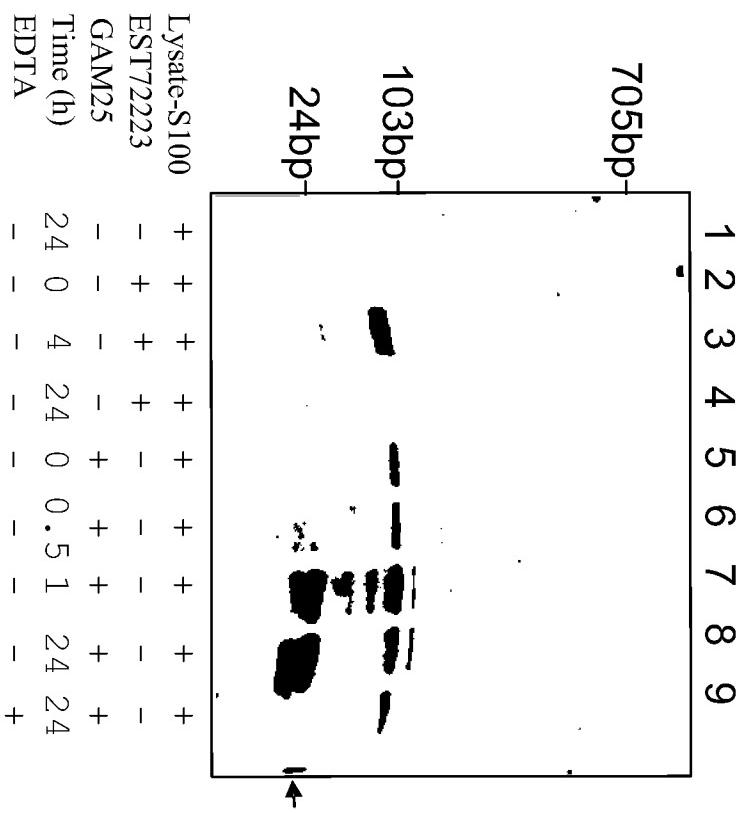
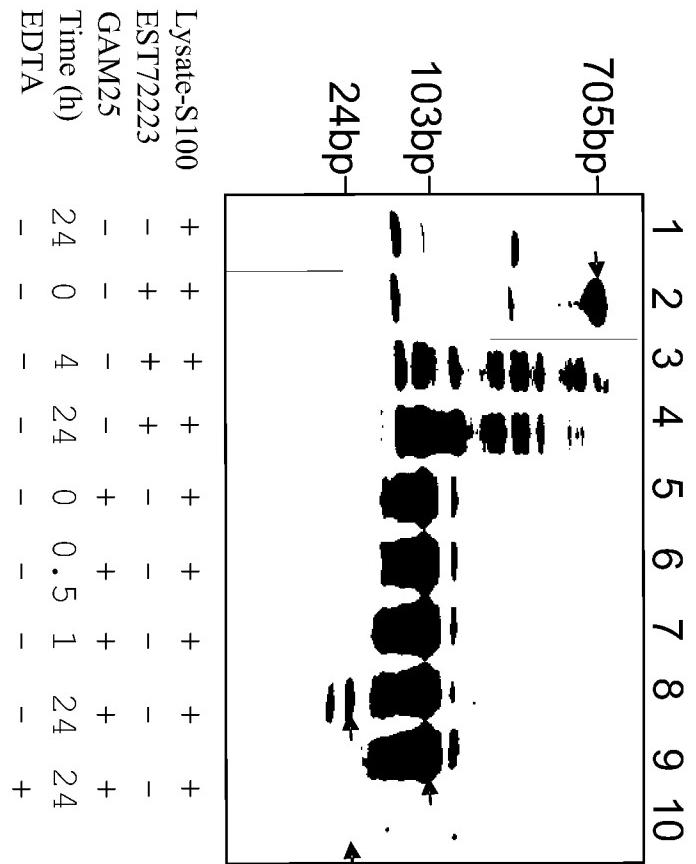


FIG. 24D

	Lysate-S100	EST72223	GAM25	Time (h)	EDTA
+	+	+	-	24	-
+	+	+	+	0	-
+	+	+	-	24	-
+	+	-	+	0	-
+	-	-	+	0.5	-
+	-	-	+	1	-
+	-	-	-	24	-
+	-	-	-	24	+

	Lysate-S100	EST72223	GAM25	Time (h)	EDTA
+	+	+	-	24	-
+	+	+	-	0	-
+	+	-	+	24	-
+	-	-	+	0	-
+	-	-	-	0.5	-
+	-	-	-	1	-
+	-	-	-	24	-
+	-	-	-	24	+